HH Subgroup Progress Report (via email to Managers on June 6)

The HH technical team (Dana Davoli, Mike Poulsen, Pam Bridgen, Taku Fuji, Heather Brunelle, Tom Pinit, and Laura Kennedy) met yesterday to discuss the proposed human health risk components of the Comprehensive Round 2 Report and identified remaining issues. We categorized these issues as either technical or requiring management decision. We will meet again (with the eco team, as needed) to resolve the technical issues. Here is a summary of the issues discussed at the meeting:

Management Decision Required:

- There were specific questions regarding some of the items identified as being included in Section 10 of the April 14 draft outline for the Comprehensive Round 2 Report ("Preliminary Identification of Areas of Potential Concern")? What are the initial PRGs and do they include potential ARARs? How are initial PRGs used to identify "Proposed AOPCs"?

- Should the HHRA include a drinking water scenario (residential and industrial)? If so, should MCLs be used to select surface water COPCs and should source surface water data (i.e., near bottom grab surface water samples) be included? (Currently, only transect and HH integrated water column surface water data are proposed for evaluation in the HHRA)

- Should surface water data be screened against AWQC for purposes of bioaccumulation in the HHRA? If chemical concentrations exceed AWQC, then how should the chemicals be evaluated in the HHRA, considering the available fish tissue data?

- Should TZW be screened in the HHRA? Should TZW be screened in Section 10? What screening values should be used for TZW?

- Should the HHRA include ingestion of bivalves? If so, what ingestion rates/exposure point concentrations should be used for this evaluation?

Technical Issues:

Human Health Only

- How do we incorporate the supplemental EPA guidance on cancer risks for early-life exposures?

- How do we evaluate the diver scenario (both for surface water and in-water sediment), i.e. what are the exposure parameters?

Eco Input Required

- What (if any) "historical" and recent non-LWG data should be included in the risk assessments?

- Initial PRG development for bioaccumulation/fish consumption pathway was mentioned and tabled to be further discussed in detail during the modeling discussions on June 6 (e.g., what chemicals will be modeled using Gobas/Arnot vs. BSAFs, what fish species will be evaluated, PCB Aroclors vs. congeners, will BSAFs be literature-derived or site-specific).

Additional Topics of Discussion:

- PBTs in breast milk: This scenario is not needed for the Comprehensive Round 2 Report (the chemicals that will be evaluated will be risk drivers for HH). The approach to evaluate this scenario will be resolved later.

- PAHs: The elevated detection limits will be discussed in the uncertainty section. We will resolve the type/level of assessment later.

- PBDEs/Additional biota: These issues do not need to be resolved for the Comprehensive Round 2 Report.

- Riparian soil: This is not an issue for HH (only eco). The HHRA will use existing beach sediment and in-water sediment to evaluate HH scenarios.

If you would like additional information about the meeting or any of the above issues, please contact the HH technical team members.

Progress Report on Fate and Transport/Food Web Modeling Approaches

Status.

- Objectives for Fate and Transport modeling were discussed and preliminarily agreed upon on May 2. These objectives were refined on June 6 and will receive final EPA review and agreement at the June 12 meeting.
- A compromise approach for fate and transport modeling was preliminarily agreed to on May 17 and further refined on June 6.
- The compromise approach uses the LWG developed EFDC model to generate water and sediment fluxes that will inform the EPA proposed combined fate and transport/food web model. This is referred to as the "Hybrid Model".
- The food web portion of the Hybrid Model will be refined for consistency with previous LWG efforts and outstanding EPA comments and used for assessments needed for the Round 2 Report (e.g., development of PRGs).
- The species and chemicals to be included in the application of the food web model for development of PRGs in the Round 2 Report were agreed upon at the June 6 meeting.
- The spatial scale (site wide) for calibration of the food web model for its use in development of PRGs for the Round 2 Report was also agreed upon.
- Other modeling tools will be used to meet other fate and transport modeling objectives.

Issues.

There are no major outstanding issues to resolve. The details of the modeling approach will be determined following the schedule outlined below.

Next Steps.

- Provide table of preliminary COPCs for Food Web Model or BSAF approach to EPA as soon as possible. Work with EPA Partners on refining Food Web Model (e.g., set up, function) for use in Round 2 Report.

- The tentative schedule for developing and refining the Hybrid Model is:
  1. Through September – EPA and LWG jointly develop concept, architecture, linkage logistics, and modeling scenarios for Hybrid Model. Agree on final architecture and parameterization for food web portions in time for Round 2 Report development.
  2. a. Mid-October – Calibration of EFDC model completed.
  2. b. Mid-October – Complete preliminary Hybrid Model runs using non-calibrated EFDC outputs. Identify Round 3B data gaps during this step.
  3. December – Complete preliminary Hybrid Model runs using outputs of calibrated EFDC model for "typical" river conditions (e.g., calibration/validation period conditions).
  4. March 2007 – Complete full integration of Hybrid Model and final baseline runs of Hybrid Model for a range of river conditions and provide Technical Memo on accuracy and ability of model to be used for FS alternative evaluations. Possible additional 3B data gaps identified here.

- EPA review of the Hybrid Model will be on Step 4 technical memo.

- The completed Hybrid Model would then be used in the evaluation of long term outcomes of remedial alternatives during the FS development in late 2007.
- EPA and LWG Managers should consider what will be considered acceptable model performance for use in determination of acceptable chemical concentrations in sediment (for PRGs, FWM only) and supporting remedial action decisions (Hybrid Model), and identify an appropriate point at which further data collection is no longer reasonably expected.